

#### ABSTRACT OF THE DISCLOSURE

A semiconductor substrate of the present invention is a DSP wafer or Semi-DSP wafer (Fig. 2) having a flatness of an SFQR value  $\leq 70$  (nm) and containing boron at a concentration not lower than  $5 \times 10^{16}$  (atoms/cm<sup>3</sup>) nor higher than  $2 \times 10^{17}$  (atoms/cm<sup>3</sup>) within 95% or more of rectangular regions of  $25 \times 8$  (mm<sup>2</sup>) arranged on a front face of the substrate. Specifically, a silicon crystal layer by an epitaxial growth is formed on a front face of a silicon substrate having the above substrate boron concentration.